**GULFCO ISSUES** July 27, 2005

1. **EPA Requirement:** Collect discrete soil samples from 0-6" and 1-2'.
**PRP Proposal:** Composite shallow & deeper samples for all analysis except VOCs.

**Why collect discrete samples?**

- Discrete samples are better able to identify hot spots and extent of contamination.
- Based on TCEQ's HRS Report, there are multiple pathways for soil sample contamination (i.e., spills, water runoff, air deposition, etc.). Soil may be contaminated differently at different depths.

**Discussion:**

- Compositing may dilute any contamination & risk.
- Composite sampling based on an assumption, not supported by documentation, that there was considerable reworking & mixing of soils.
- The area & depth of any such reworking is unknown.
- The date of any reworking and spills is unknown. Did the reworking occur before any spills? If so, any reworking would not be a factor in mixing areas of contamination.

2. **EPA Requirement:** Shallow soil samples (top 1") from vacant lot southwest of Site should be analyzed for SVOCs, pesticides, PCBs, & metals.
**PRP Proposal:** Samples from vacant lot should be analyzed only for COCs in on-site samples that exceed residential based soil screens.

**Why do analysis for all SVOCs, pesticides, PCBs, & metals?**

- Purpose for shallow samples is to investigate air deposition from sand blasting operations & follow any contamination from the Site to the community.
- Dust from Site operations blew towards Bridge Harbor community over this vacant lot.
- Barge cleaning business installed fabric fence on southwest side of Site to catch this dust.
- Community is concerned about health effects from Site air releases.

**Discussion:**

- The PRP proposal is based on a false assumption that on-site and off-site soil samples with different pathways of contamination are identical and therefore comparable.
- On-site contamination may result from surface water runoff and spills in addition to air deposition while off-site contamination may result from the air deposition pathway.
- On-site samples will be collected from 0-6", which may dilute any surface contamination resulting from air deposition.
- A 0-6" sample result that is less than the screens does not mean that the top 1" is uncontaminated and is not a valid basis for ruling out COCs for a different

pathway (i.e., air deposition).

3. **EPA Requirement:** Collect fish & crab samples. Offsite/background fish samples should also be collected for comparison to Site area fish samples to rule out any off-site sources.
**PRP Proposal:** Sample collection contingent on sediment samples exceeding sediment-fish PCLs on a statistical basis.

**Why collect fish & crab samples?**

- Hercules dumped barge waste water directly into the Intracoastal Waterway (from 1997 interview by TNRCC Special Investigator).
- Sediment samples collected by TNRCC in 2000 confirmed a release of contamination to the Intracoastal Waterway from the Site (PAHs, lead, zinc, pesticide).
- Fish sampling is typical for Superfund Sites. Fish sampling has been performed for other Superfund sites in EPA Region 6, including fund lead & PRP lead sites.
- Community is concerned about consumption of contaminated fish & crab.

**Discussion:**

- PRPs concern about other sources may not be significant. The Intracoastal Waterway is not contaminated except at the Site. Multiple background sediment samples collected southwest and northeast of the site, up to 2 ½ miles away, were generally non-detect for organics and had low metals concentrations.

4. **EPA Requirement:** Perform biological tissue testing & sediment toxicity testing if sediment sample results exceed TCEQ sediment screens on a statistical basis, or if any bioaccumulative chemical is detected in the sediment.
**PRP Position:** If the TCEQ sediment screens are exceeded, then a Screening Level Ecological Risk Assessment (SLERA) will be performed to determine the need for any additional testing.

**Why do tissue and toxicity testing?**

- According to TCEQ's HRS Report, surface water runoff goes to wetlands north & west of Site.
- According to a TDWR inspection report, the former impoundments discharged contaminated surface water outside of ponds.
- According to TCEQ's HRS report, the former impoundments leaked (multiple chemicals are present in shallow ground water below the impoundments, some at very high concentrations (> 30% of solubility)). This contamination may migrate to nearby wetlands.
- Exceedance of the TCEQ sediment screens indicates there may be problems & additional data should be collected to perform a Baseline Ecological Risk Assessment.

**Discussion:**

- Comparison to the sediment screens and identification of any bioaccumulative

contaminants detected is a screening level risk assessment. A second SLERA would not add anything. Exceedance of the sediment screens (and detection of bioaccumulative contaminants) is the trigger for collection of site specific biological data (tissue sampling & toxicity testing.) since exceedances indicate a potential risk.

- Another study with the same information will only delay the collection of the necessary data and development of the ecological risk assessment.

5. **EPA Requirement:** Collect sediment samples in canals in the Bridge Harbor community.
**PRP Position:** Sediment sample collection in community canals contingent on sediment samples at perimeter of Site exceeding screens. If contamination is found on initial samples, step out 200' to collect an additional sediment sample; repeat to find extent.

**Why collect canal sediment samples?**

- Dust from Site operations blew into the Bridge Harbor community and canals.
- Barge cleaning business installed fabric fence on southwest side of Site to catch this dust.
- Community is concerned about health effects from Site air releases.

**Discussion:**

- It is based on a false assumption that on-site and canal sediment samples (with different pathways of contamination) are comparable.
- Sediment contamination at the Site perimeter may result from multiple sources (surface water runoff, spills, or ground water flow to surface water, in addition to air deposition) while sediment contamination at the canals in the Bridge Harbor community may only result from air deposition.
- Contamination extent based on one pathway, such as surface water runoff, may not be relevant to the air deposition pathway.